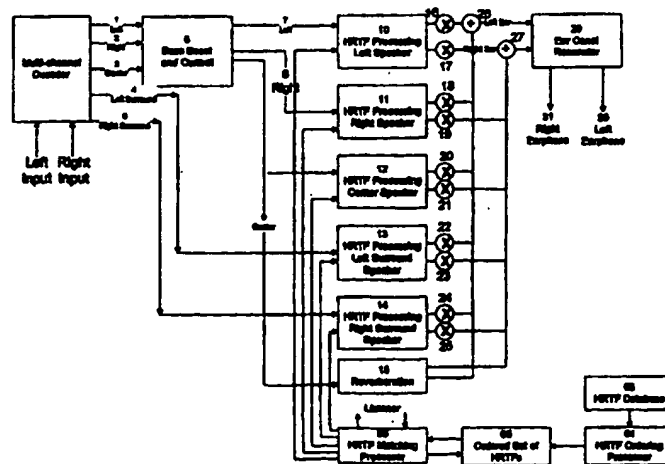




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(54) Title: METHOD AND DEVICE FOR PROCESSING A MULTI-CHANNEL SIGNAL FOR USE WITH A HEADPHONE



(57) Abstract

A method and device processes multi-channel audio signals, each channel corresponding to a loudspeaker placed in a particular location in a room, in such a way as to create, over headphones, the sensation of multiple "phantom" loudspeakers placed throughout the room. Head Related Transfer Functions (HRTFs) are chosen according to the elevation and azimuth of each intended loudspeaker relative to the listener, each channel being filtered with an HRTF such that when combined into left and right channels and played over headphones, the listener senses that the sound is actually produced by phantom loudspeakers placed throughout the "virtual" room. A database collection of sets of HRTF coefficients from numerous individuals and subsequent matching of the best HRTF set to the individual listener provides the listener with listening sensations similar to that which the listener, as an individual, would experience when listening to multiple loudspeakers placed throughout the room. An appropriate transfer function applied to the right and left channel output allows the sensation of open-ear listening to be experienced through closed-ear headphones.

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INTERNATIONAL SEARCH REPORT

Intern al Application No

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A. CLASSIFICATION OF SUBJECT MATTER
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 H04S H04R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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A	WO 95 17799 A (CENTRAL RESEARCH LAB LTD ET AL.) 29 June 1995 see page 2, line 17 - page 4, line 2 --- -/--	1,15,30



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Patent family members are listed in annex.

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International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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